JOURNAL OF
Inorganic Biochemistry

Volume 40, Number 1, 1990

Contents

X. SHI and N. S. DALAL (Morgantown, West Virginia, USA)
One-Electron Reduction of Chromate byNADPH-dependent Glutathione Reductase 1

R. L. GANEVA, N. CHR. SPASSOVSKA, and D. D. GENCHEV (Sofia, Bulgaria)
The Effect of Some Platinum Compounds on the Biosynthesis of RNA and its Precursors 13

R. G. FINKE and B. D. MARTIN (Eugene, Oregon, USA)
Coenzyme $AdoB_{12}$ vs $AdoB_{12}^{-}$· Homolytic Co-C Cleavage Following Electron Transfer: A Rate Enhancement $\geq 10^{12}$ 19

E. L. M. LEMPERS, M. J. BLOEMINK, J. BROUWER, Y. KIDANI, and J. REEDIJK (The Netherlands)
The New Antitumor Compound, *cis*-[$Pt(NH_3)_2$(4-Methylpyridine)Cl]Cl, Does Not Form N7, N7-d(GpG) Chelates with DNA. An Unexpected Preference for Platinum Binding at the 5′G in d(GpG) 23

J. BALLA, T. KISS (Hungary), M. JEZOWSKA-BOJCZUK, H. KOZLOWSKI, B. LEJCZAK, and E. MATCZAK-JON (Poland)
Complexes of Aminophosphonates 5. Interaction of Copper(II) Ion with Aminophosphonic Inhibitors of Leucine Aminopeptidase 37

B. D. RAY, B. D. N. RAO (Indianapolis, Indiana, USA), and J. M. MOORE (Philadelphia, Pennsylvania, USA)
^{31}P NMR Studies of Enzyme-Bound Substrate Complexes of Yeast 3-Phosphoglycerate Kinase: III. Two ADP Binding Sites and Their Mg(II) Affinity; Effects of Vanadate and Arsenate on Enzymic Complexes with ADP and 3-P-Glycerate 47

C. ZHANG, H. SPENO, C. CLAIRMONT, and D. J. NELSON (Worcester, Massachusetts, USA)
The Isolation of an Unusual Parvalbumin from the White Muscle of the Silver Hake (*Merluccius Bilinearis*) 59

A. BARNEA and B. M. KATZ (Dallas, Texas, USA)
Uptake of ^{67}Copper Complexed to ^{3}H-Histidine by Brain Hypothalamic Slices: Evidence that Dissociation of the Complex is not the Only Factor Determining ^{67}Copper Uptake 81

Journal of Inorganic Biochemistry is cited in Biological Abstracts, Chemical Abstracts, Current Contents (Life Sciences), Excerpta Medica, Index Medicus, International Abstracts in Biological Sciences, PASCAL

Volume 40, Number 2, 1990

Contents

E. TSELEPI-KALOULI and N. KATSAROS (Athens, Greece)
The Interaction of Rh(II) and Rh(III) with DNA 95

A. BARNEA, D. E. HARTTER, G. CHO, K. R. BHASKER, B. M. KATZ, and M. D. EDWARDS (Dallas, Texas, USA)
Further Characterization of the Process of In Vitro Uptake of Radiolabeled Copper by the Rat Brain 103

R. MITAL and T. S. SRIVASTAVA (Bombay, India)
Synthesis, Characterization, and DNA Binding Studies of Some Mixed-Ligand Platinum(II) Complexes of 1,10-Phenanthroline and Amino Acids 111

H. KOZLOWSKI, E. MASIUKIEWICZ, E. POTARGOWICZ, B. RZESZOTARSKA, and A. WALCZEWSKA-SUMOROK (Poland)
Ovulation-Inducing Activity of Luliberin (LHRH) Complexed by Copper(II), Nickel(II), and Zinc(II) Ions 121

C. VERCHÉRE-BÈAUR, E. MIKROS, M. PERRÈE-FAUVET, and A. GAUDEMER (Orsay, France)
Structural Studies of Metalloporphyrins. Part XI[a]: Complexes of Water-Soluble Zinc(II) Porphyrins with Amino Acids: Influence of Ligand-Ligand Interactions on the Stability of the Complexes 127

W. KADIMA and D. L. RABENSTEIN (Edmonton, Canada)
A Quantitative Study of the Complexation of Cadmium in Hemolyzed Human Erythrocytes by ^{1}H NMR Spectroscopy 141

R. A. HOLWERDA (Lubbock, Texas, USA)
Solvent Dependence of the Cu(II)-S Redox Decay Rate in Mercaptoacetatotris (2-Pyridylmethyl) Aminecopper(II) 151

P. ASCENZI, M. COLETTA, A. DESIDERI, F. POLIZIO, S. G. CONDO, and B. GIARDINA (Rome, Italy)
Effect of Inositol Hexakisphosphate on the Spectroscopic Properties of the Nitric Oxide Derivative of Ferrous Horse and Bovine Hemoglobin 157

H. SIGEL and R. TRIBOLET (Basel, Switzerland)
Synergism Between Different Metal Ions in the Dephosphorylation of Adenosine 5′-Triphosphate (ATP) in Mixed Metal Ion/ATP Systems, and Influence of a Decreasing Solvent Polarity (Dioxane-Water Mixtures) on the Dephosphorylation Rate. Effects of Mg^{2+}, Na^{2+}, and NH_4^+ Ions 163

H. A. TAJMIR-RIAHI (Quebec, Canada)
Coordination Chemistry of Vitamin C. Part I. Interaction of L-Ascorbic Acid with Alkaline Earth Metal Ions in the Crystalline Solid and Aqueous Solution 181

Volume 40, Number 3, 1990

Contents

W. ZHANG, S. SONG, and S. DONG (Changchun, Peoples Republic of China)
Heterogeneous Electron Transfer of Cytochrome c Facilitated by Polypyrrole and Methylene Blue Polypyrrole Film Modified Electrodes **189**

T. SAKURAI (Ishikawa, Japan) and S. SUZUKI (Osaka, Japan)
An EPR Detectable Form of Type 3 Copper in Type 2 Copper-Depleted *Rhus Vernicifera* Laccase **197**

N. BARBA-BEHRENS, J. L. BAUTISTA, M. E. RUIZ, P. JOSEPH-NATHAN, A. FLORES-PARRA, and R. CONTRERAS (Mexico)
Coordination Compounds Derived from the Interaction of Streptomycin and Cobalt, Nickel, Copper, and Calcium Salts Characterized by ^{13}C NMR and Spectroscopic Studies. Structure and Bonding Properties of the Streptidine Fraction **201**

M. KASZUBA and G. R. A. HUNT (Mid-Glamorgan, Wales)
Protection Against Membrane Damage: A ^{1}H-NMR Investigation of the Effect of Zn^{2+} and Ca^{2+} on the Permeability of Phospholipid Vesicles **217**

W. BAL (Wroclaw, Poland), I. BERTINI (Florence, Italy), H. KOZLOWSKI (Wroclaw, Poland), R. MONNANNI, A. SCOZZAFAVA (Florence, Italy), and G. Z. SIATECKI (Wroclaw, Poland)
The Unusual Behavior of the Inhibitor S(+) (1-Amino-2-Phenylethyl) Phosphonic Acid Towards Carboxypeptidase A **227**

G. J. BULOO, H. van der GOOT, A. BAST, and H. TIMMERMAN (Amsterdam, The Netherlands)
Copper Complexes of 1,10-Phenanthroline and Related Compounds as Superoxide Dismutase Mimetics **237**

J. M. MORATAL, A. DONAIRE, J. SALGADO, M-J. MARTINEZ-FERRER (Valencia, Spain)
Interaction of Sulphate and Chloride with Cobalt(II)-Carbonic Anhydrase **245**

Y. QU and N. FARRELL (Burlington, Vermont, USA)
Effect of Diamine Linker on the Chemistry of Bis(Platinum) Complexes. A Comparison of the Aqueous Solution Behavior of 1,4-Butanediamine and 2,5-Dimethyl-2,5-Hexanediamine Complexes **255**

P. A. MOTCHNIK and A. L. TAPPEL (Davis, California, USA)
Multiple Selenocysteine Content of Selenoprotein P in Rats **265**

J. SUN and D. K. Y. SOLAIMAN (Pittsburgh, Pennsylvania, USA)
The Cyclic Voltammetric Study of Iron-Tallysomycin in the Absence and Presence of DNA **271**

Volume 40, Number 4, 1990

Contents

S. V. KHANGULOV, M. G. GOLDFELD, V. V. GERASIMENKO, N. E. ANDREEVA, V. V. BARYNIN, and A. I. GREBENKO (Moscow, USSSR)
Effect of Anions and Redox State on the Activity of Manganese Containing Catalase From *Thermus Thermophilus* 279

A. BIGI, G. COJAZZI, M. GAZZANO, A. RIPAMONTI, and N. ROVERI (Bologna, Italy)
Thermal Conversion of Octacalcium Phosphate Into Hydroxyapatite 293

S. DEIANA, C. GESSA, P. PIU, and R. SEEBER (Sassari, Italy)
Iron(III) Reduction by *D*-Galacturonic Acid. Part II. Influence of Uranyl(VI), Lead(II), Nickel(II), and Cadmium(II) Complexes Formation 301

L. M. NETO, M. TABAK, and O. R. NASCIMENTO (Sao Carlos, Brazil)
Effect of Hydration in metHb: Reversible Changes Monitored by ESR of Iron 309

D. A. MOUTAFCHIEV, L. M. SIRAKOV, and V. A. OVCHAROFF (Sofia, Bulgaria)
Effect of Ascorbic Acid, Sodium Citrate, Sodium Bicarbonate, and Their Combination Effect on the Binding of $^{59}Fe^{2+}$ and $^{59}Fe^{3+}$ to Plasma Membrane of Lactating Mouse Mammary Gland 323

R. G. BHIRUD and T. S. SRIVASTAVA (Bombay, India)
Monomeric and Dimeric Mixed-ligand Copper(II) Complexes of 2,2′-Bipyridine/1,10-Phenanthroline and 1-Methylimidazole With Imidazoles as Catalysts for Superoxide Dismutation 331

L. L. SLAVIN and R. N. BOSE (Kent, Ohio, USA)
Phosphonato Complexes of Platinum(II): Kinetics of Formation and Phosphorus-31 NMR Characterization Studies 339

R. NAGAR (Agra, India)
Syntheses, Characterization, and Microbial Activity of Some Transition Metal Complexes Involving Potentially Active O and N Donor Heterocyclic Ligands 349

K. VÁRNAGY (Debrecen, Hungary), M. JEZOWSKA-BOJCZUK, J. SWIATEK, H. KOZLOWSKI (Wroclaw, Poland), I. SÓVÁGÓ (Debrecen, Hungary), and R. W. ADAMIAK (Poznan, Poland)
Metal Binding Ability of Hypermodified Nucleosides of t-RNA. Potentiometric and Spectroscopic Studies on the Metal Complexes of N-[(9-β-D-Ribofuranosylpurin-6-yl)-Carbamoyl] Threonine 357

AUTHOR INDEX 365

SUBJECT INDEX 367